

engineering data service

MECHANICAL DATA

Bulb	T-5 ½
Base	E7-1, Miniature Button 7-Pin
Outline	5-3
Basing	7CV
Cathode	Coated Unipotential
Mounting Position	Any

ELECTRICAL DATA

HEATER CHARACTERISTICS

	6CA5	12CA5	17CA5	25CA5		
Heater Voltage	6.3	12.6	16.8	25.0	Volts	
Heater Current	1200	600	540	300	Ma	
Heater Warm-up Time[1]		11	11		Seconds	
Heater-Cathode Voltage (Design Center Values)						
Heater Negative with Respect to Cathode						
Total DC and Peak	200	200	200	200	Volts	Max.
Heater Positive with Respect to Cathode						
DC	100	100	100	100	Volts	Max.
Total DC and Peak	200	200	200	200	Volts	Max.

DIRECT INTERELECTRODE CAPACITANCES (Unshielded)

Grid No. 1 to Plate	0.5 μμf
Input	15 μμf
Output	9.0 μμf

RATINGS (Design Center Values)

Plate Voltage	130 Volts	Max.
Grid No. 2 Voltage	130 Volts	Max.
Positive Grid No. 1 Voltage	0 Volts	Max.
Plate Dissipation	5.0 Watts	Max.
Grid No. 2 Dissipation	1.4 Watts	Max.
Grid No. 1 Circuit Resistance		
Fixed Bias	0.1 Megohm	Max.
Cathode Bias	0.5 Megohm	Max.
Bulb Temperature at Hottest Point	180° C	

CHARACTERISTICS AND TYPICAL OPERATION

Class A_1 Amplifier

Plate Voltage	110	125	Volts
Grid No. 2 Voltage	110	125	Volts
Grid No. 1 Voltage	−4.0	−4.5	Volts
Peak AF Grid No. 1 Voltage	4.0	4.5	Volts
Zero-Signal Plate Current	32	37	Ma
Maximum-Signal Plate Current	31	36	Ma
Zero-Signal Grid No. 2 Current	3.5	4.0	Ma
Maximum-Signal Grid No. 2 Current	7.5	11	Ma
Transconductance	8100	9200	μmhos
Plate Resistance (Approx.)	16,000	15,000	Ohms
Load Resistance	3500	4500	Ohms
Maximum-Signal Power Output	1.1	1.5	Watts
Total Harmonic Distortion (Approx.)	5	6	Percent

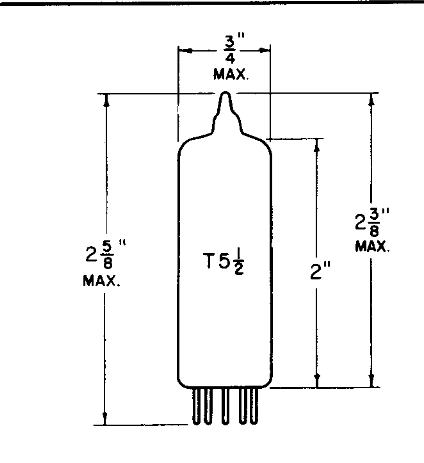
NOTE:

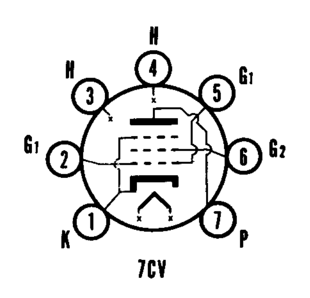
1. *Heater warm-up time is defined as the time required for the voltage across the heater to reach 80% of the rated heater voltage after applying four (4) times rated heater voltage to a circuit consisting of the tube heater in series with a resistance equal to three (3) times the rated heater voltage divided by the rated heater current.*

QUICK REFERENCE DATA

The Sylvania Types 6CA5, 12CA5, 17CA5, and 25CA5 are miniature beam power pentodes designed for service as audio output amplifiers. They feature high power sensitivity at relatively low plate and screen voltages.

Types 12CA5 and 17CA5 have controlled heater warm-up time for series string operation.

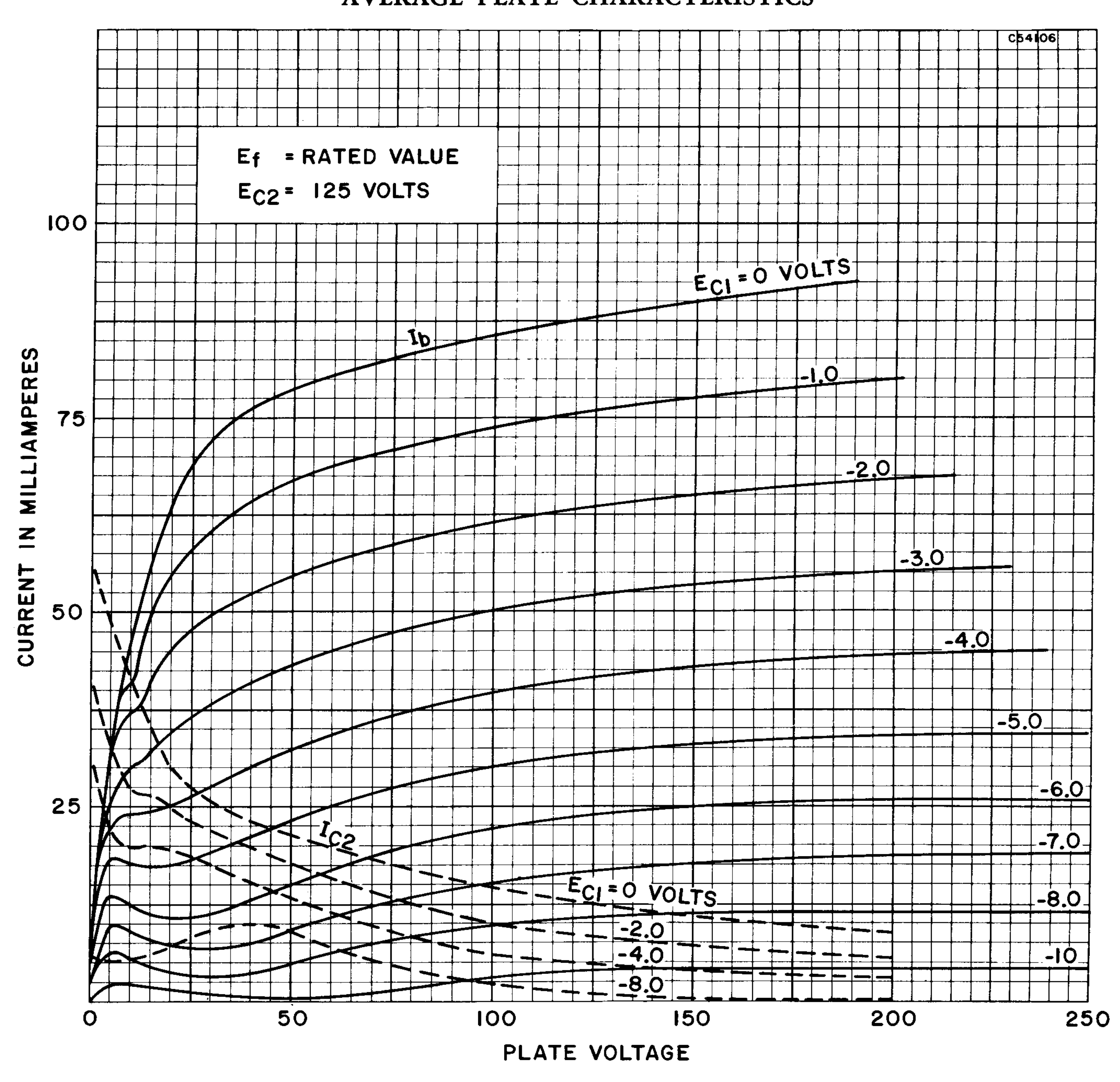




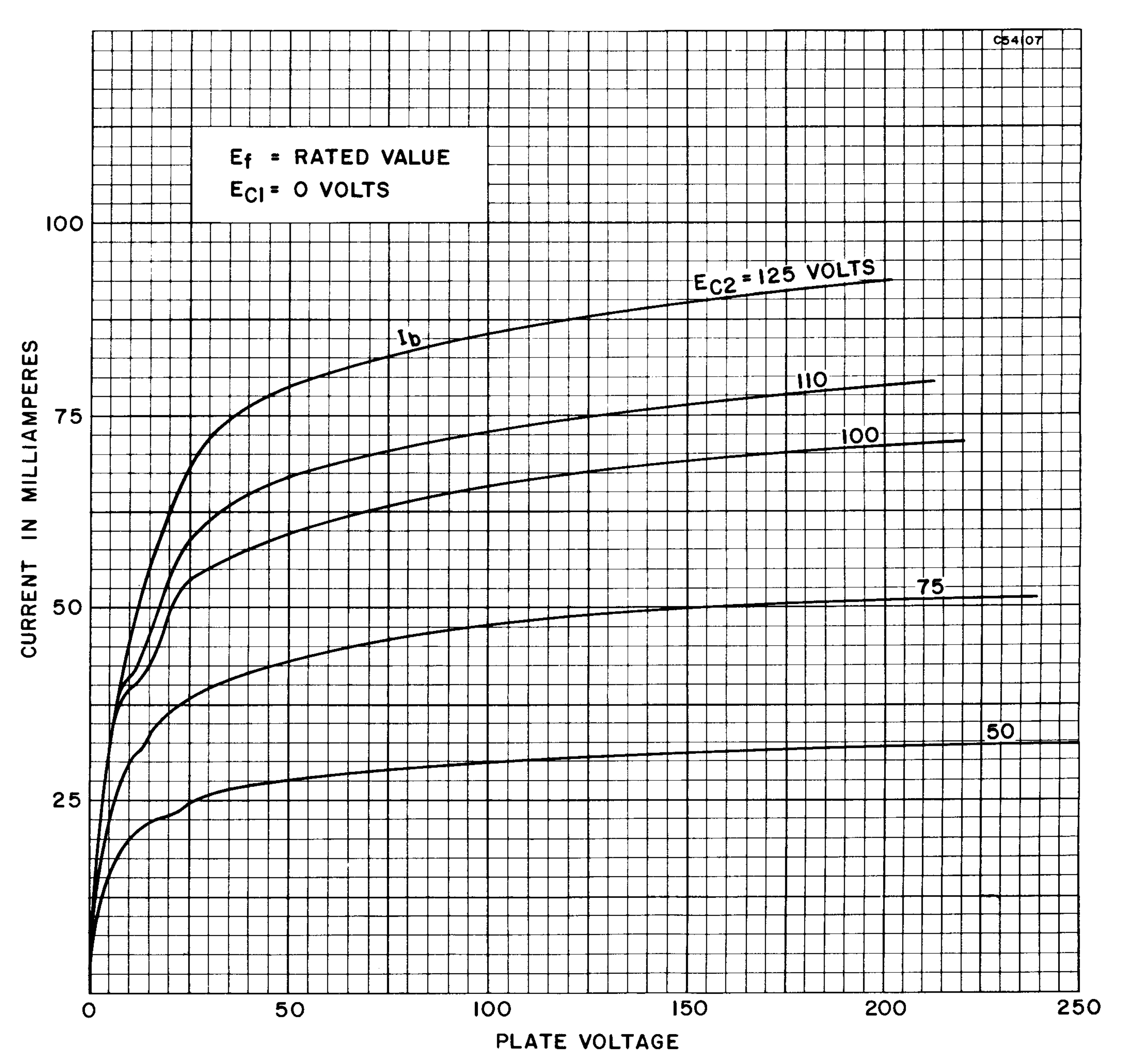
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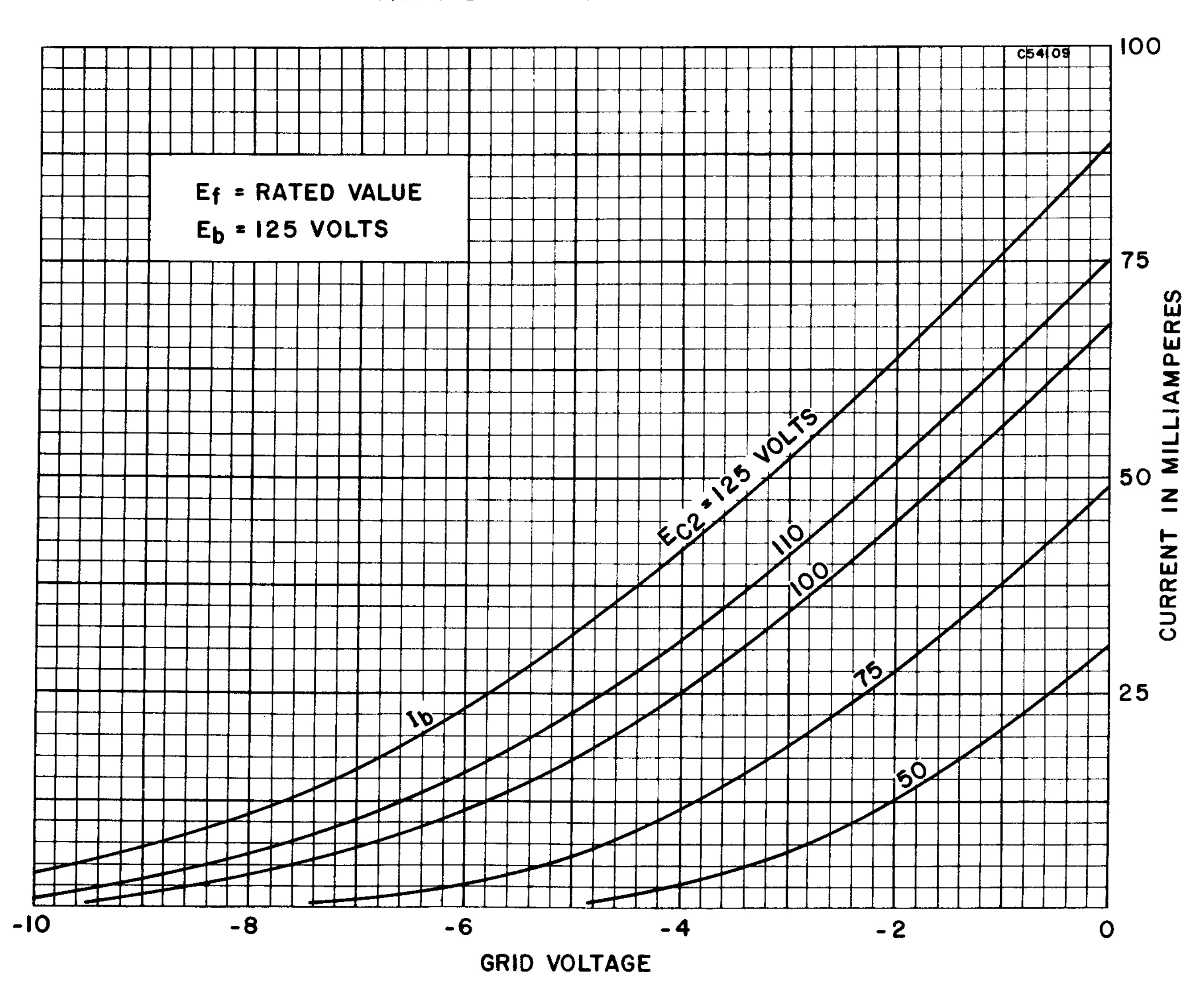
AVERAGE PLATE CHARACTERISTICS



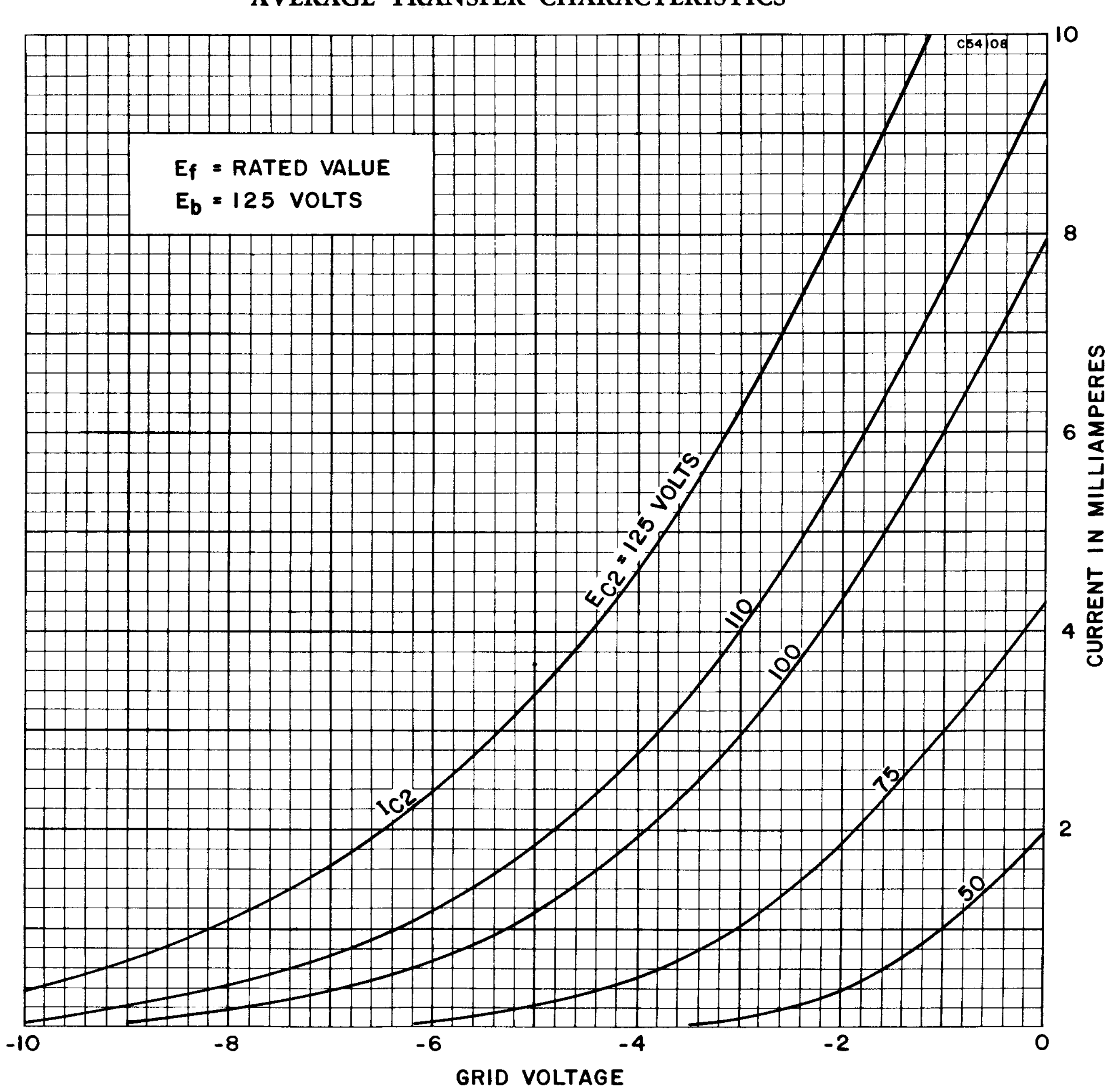
AVERAGE PLATE CHARACTERISTICS



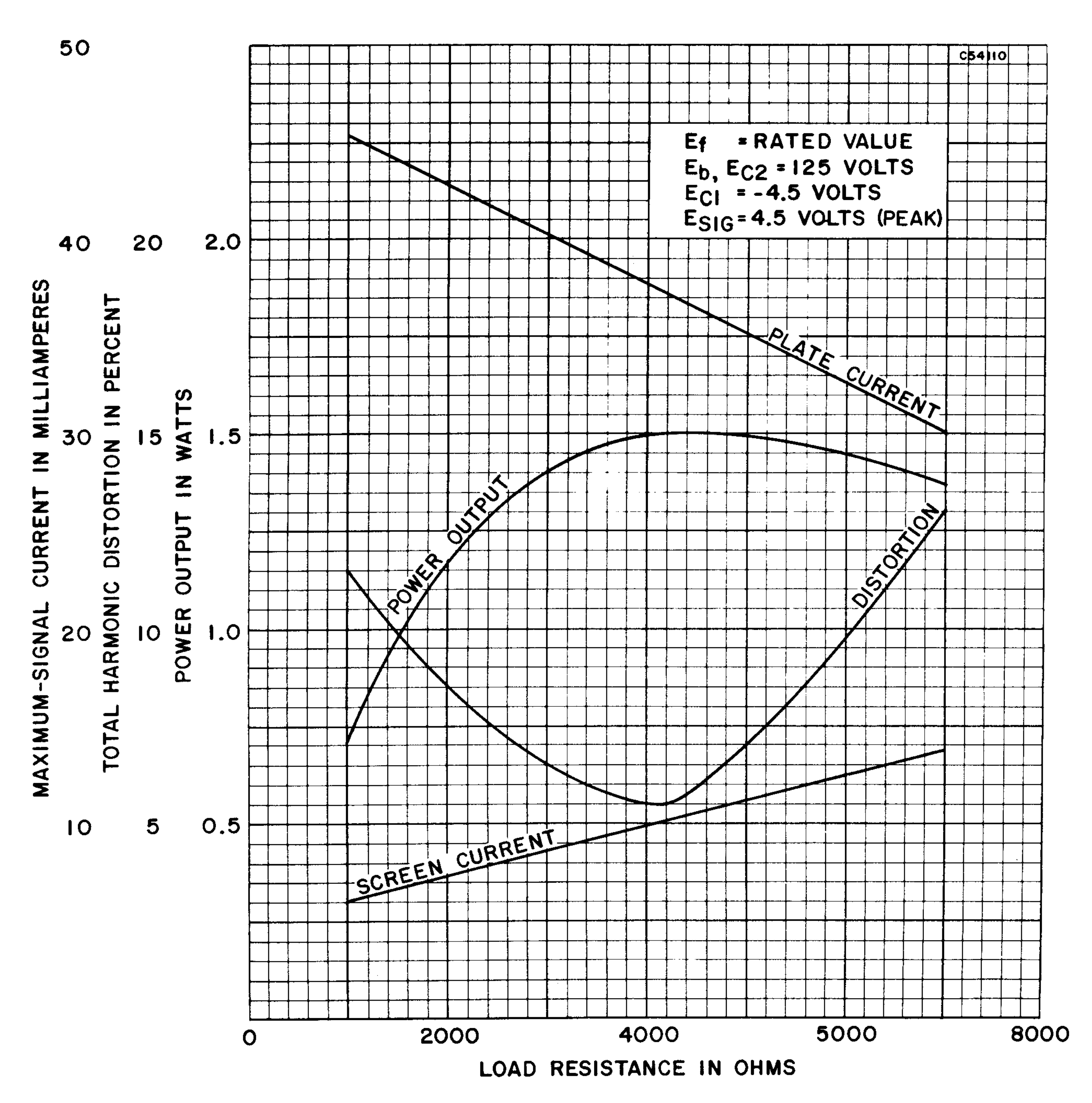
AVERAGE TRANSFER CHARACTERISTICS



AVERAGE TRANSFER CHARACTERISTICS



AVERAGE OPERATION CHARACTERISTICS



AVERAGE OPERATION CHARACTERISTICS

